PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re the application of

Mark Hernandez et al.

Serial No: 10/627,947

Filed: July 25, 2003

For: REMOVING METALS FROM SOLUTION USING METAL BINDING COMPOUNDS AND SORBENTS THEREFOR

Examiner: Ivars C. Cintins

Art Unit: 1724

Attorney Docket: MJ-1

Date: June 20, 2006

CERTIFICATE OF ELECTRONIC TRANSFER. I hereby certify that this correspondence is being electronically transmitted to the United States Patent and Trademark Office on June 20, 2006.

Signed: _____
Jay R Beyer

PRE-APPEAL BRIEF REQUEST FOR REVIEW

Mail Stop Appeal Brief-Patents
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Dear Sir:

Applicants request review of the final rejection in the above-identified application. No amendments are being filed with this request.

The request is being filed with a Notice of Appeal.

The review is requested for the reasons stated on the attached sheets.

Remarks begin on page 2 of this paper.

REMARKS

As described in detail in the responses filed by the Applicant dated August 24, 2005 and April 25, 2006 (entered responsive to Applicants' Response to Notice of Non-Compliant Amendment dated November 3, 2005), the Examiner has rejected claims in the present application on prior art references which do not teach or suggest the claim limitations to which they have been applied. Of particular import is the April 25, 2006 response by Applicants after Final.

The Examiner Improperly Extended the Teachings of the Primary Reference

All of the claims in question are directed to immobilization of metal cations by using an amphipathic, heterocyclic, metal-coordinating compound in combination with a sorbent. Further, the claims are specifically limited to an acidic environment.

It is the Examiner's position that it would be obvious to modify a doctorial thesis by Gruden entitled FATE AND TOXICITY OF AIRCRAFT DEICING FLUID ADDITIVES THROUGH ANAEROBIC DIGESTION (hereinafter, Gruden) in view of another publication entitled METAL ADSORPTION BY ACTIVATED CARBON: EFFECT OF COMPLEXING LIGANDS, COMPETING ADSORBATES, IONIC STRENGTH, AND BACKGROUND ELECTROLYTE by Reed, et al. (hereinafter Reed) as teaching the claimed immobilization technique. The Examiner readily admits that Gruden does not disclose the claimed process in an acidic solution.

Specifically, the Examiner's position, with respect to the rejections of independent claims 1, 28, 30, 33 and 34, is premised upon an interpretation of a very limited portion of a particular passage in Gruden, taken from page 123 of the reference, as being broad enough to be consistent with an acidic process environment. The Gruden passage is set forth immediately hereinafter for purposes of convenience and with the relied on portion of the passage emphasized.

> Current novel digester configurations (USAB) have incorporated GAC as a support matrix to retain high biomass levels. Results from this research indicate that the addition of GAC to an anaerobic treatment system for ADF waste may diminish the toxic effects of MeBT and may eliminate MeBT from the effluent. This design may be fortuitous for other industrial waste streams because MeBT sorbs to GAC while simultaneously binding heavy metals; thus, adding MeBT to PACT or USAB may enable the treatment of waste streams with very high metals content that would otherwise be toxic. [emphasis supplied]

Applicants continue to disagree with this position. The suggestion in the Gruden passage with respect to treatment of "other industrial waste streams," which forms the foundation of the Examiner's rejections, is clearly limited to waste streams that are to be treated in an anaerobic digester, as described in Applicants response of April 25, 2006. In this regard, Gruden is concerned with a biomass in a digester and its preservation. An acidic waste stream will kill the biomass, in and by itself. With this in mind, it is impossible to modify the Gruden reference to process an acidic waste stream, since the digester will be completely inoperable for its intended purpose. Further, the passage fails to make an affirmative statement as to treatment of these "other industrial waste streams" in digesters such as PACT or USAB

digesters. Rather, the passage merely describes what "may" be enabled. Certainly, such a suggestion would not be sufficient with respect to passing muster under 35 U.S.C. § 112 with respect to enablement.

It should be appreciated that the Examiner has carefully selected only a portion of one sentence in making out the rejection. It is well-settled that it is impermissible to pick and choose only so much of a reference is required to make out a rejection to the exclusion of what the reference teaches as a whole. Here, that selection is so specific as to be limited to a portion of a sentence. It is only in the context of such a broad, but unreasonable interpretation that the requirement of an acidic pH can be met. Clearly, the rejections fail when the passage, or even the sentence, is taken as a whole, for what it fairly teaches. It is clear that the relied on passage in Gruden is being mischaracterized and taken in isolation from the rest of the passage as having an all-encompassing scope, in order to apply to any industrial waste stream. As stated above, the modification of an anaerobic digester, as taught by Gruden, to receive an acidic waste stream, produces a device that is clearly inoperable for its intended purpose, since the acidity will kill the biomass that provides the very functionality of the digester. Further, no motivation is provided with respect to making this modification with respect to treating a metal cation containing solution, as suggested by the Examiner in the Advisory Action dated May 23, 2006, since the relied on passage says nothing about metal cations nor the acidic environment that would be required to produce them. Thus, it is respectfully submitted that a prima facie case of obviousness has not be made out for at least these reasons.

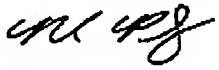
The Examiner Improperly Extended the Teachings of the Secondary Reference

The Reed reference, when relied on as providing the missing requirement for acidity, is clearly deficient as discussed in detail in Applicants' responses of August 24, 2005 and April 25, 2006 at least for the reason that the reference fails to teach, disclose, or reasonably suggest the claimed mechanism by which the metal cations are removed. In particular, Reed is directed to electrostatic immobilization while the claims recite the use of an amphipathic, heterocyclic, metal-coordinating compound that is selected based, at least in part, on a charge distribution which maintains a charge neutrality of the compound. Clearly, Applicant is not claiming electrostatic immobilization and is, fact, claiming something that is quite the opposite.

In fact, Applicants respectfully submit that Reed teaches away in this respect by disclaiming any understanding of other immobilization techniques which, most certainly, includes the claimed technique. Thus, it is respectfully submitted that a prima facie case of obviousness has not be made out for at least these reasons.

Applicants hereby respectfully request that the sufficiency of the Examiner's rejections be reviewed and, to the extent that they are deemed insufficient, withdrawn.

Respectfully submitted,



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